ASAP4004

APPLICATION PROCEDURES FOR ACCEPTANCE OF FLAME-RESISTANT CONVEYOR BELT, 30 CFR, PART 18

1.0 Fees

Part 5 of 30 CFR (Title 30, Code of Federal Regulations), originally published in the Federal Register, Vol. 52, No. 89, May 8, 1987, and updated periodically, specifies the user fees for testing, evaluation and approval of certain products manufactured for use in underground mines. Fees for processing applications under this program will be based on the issue of Part 5 in effect at the time the application is received.

1.1 The applicant will be informed in writing of the estimated maximum (cap) fee for processing the application(s). The applicant must then sign and return a form provided with the (cap) letter either agreeing to proceed with the acceptance at a cost equal to or below the cap, or to cancel the application(s).

1.2 The applicant may submit a pre-authorization notice with the application. The pre-authorization notice is a statement by the applicant authorizing MSHA to expend a stated amount of money in evaluating/testing the applicant's conveyor belt prior to the preparation and issuance of the MSHA fee estimate.

Application Guidelines

The following items must be supplied to MSHA in your initial application for conveyor belt acceptance. It is recommended that the information provided to MSHA be presented in the following order and with the paragraphs numbered as shown (1, 2, etc.). An example prepared in this manner is attached.

1. Provide application number.

   Each application should be identified by a code number assigned by the applicant. The code number shall be 6 numeric digits or less and be placed on the initial application and on all samples, subsequent correspondence, documents, drawings, and bills of material. Different numbers should be assigned to each application. Documents received without an identifying number will be returned to the sender.

2. Identify and describe the conveyor belt.

   A form is attached which is recommended for use in describing the product being submitted. In addition to

the form, special service application information should be provided as well as any special techniques required of a purchaser by the manufacturer.

3. Provide information on the compounds in the conveyor belt.

The compound ingredients are to be identified and quantified in accordance with the MSHA Modification and Addendum for submitting Formulations, Effective June 4, 1979. Three options are given; only one is to be used with each application. Be sure to specify whether method a, b, or c is used.

a. Specify each ingredient by its chemical name along with its percentage (weight) and tolerance or percentage range. Organic ingredients should be named according to the current rules of the International Union of Pure and Applied Chemistry. Inorganic ingredients should be named according to the Chemical Abstract of the American Chemical Society.

b. Specify each fire retardant ingredient by its chemical or generic name with its percentage and tolerance or percentage range or its minimum percent. List each flammable ingredient by chemical, generic, or trade name along with the TOTAL percentage of all flammable ingredients. List each inert ingredient by chemical, generic, or trade name along with the TOTAL percentage of all inert ingredients. In addition, the product formulation with percentages and tolerances should be kept on file by the applicant; the formulation shall be available to MSHA at the applicant's premises upon request should a product be involved in a mine accident, incident, or quality assurance check.

c. Specify each fire retardant ingredient by its chemical or generic name with the percentage and tolerance or percentage range or its minimum percent. List all other ingredients. A flame test quality assurance program subject to acceptance by the Approval and Certification Center, Branch of Materials and Explosion Testing, should also be provided to maintain the accepted flame resistance level of the product. The flame test program should be maintained and documented as long as the product is made and acceptance is in effect. The flame test records should be available for

examination by MSHA personnel. In addition, the product formulation with percentages and tolerances should be available to MSHA at the applicant's premises upon request should a product be involved in a mine accident, incident, or quality assurance check.

NOTE: The following may be included in the application:

The material contained in this specification is considered to be confidential commercial information and/or trade secrets as covered by federal law (5 USC 552(b) (4)) and is exempt from disclosure requirements of the Freedom and information Action (5 USC 552).

Changes in Composition of Accented Products and Extensions.

MSHA, Approval and Certification Center, Branch of Materials and Explosion Testing, may request specific formulation information (name of ingredients) with percentage and tolerances) and/or test data, if an applicant is requesting a change in composition of an accepted product or requesting an extension. The request by MSHA will be to determine if the change increases the flammability or toxicity of the product.

4. Flammability Testing.

MSHA will test conveyor belt samples submitted. Conveyor belting is defined as "fire-resistant" in accordance with the test specified in Code of Federal Regulations, Title 30, Part 18, Section 18.65. Flammability test data are not required from the applicant.

5. Provide the specified toxicity information.

The applicant should provide information on the toxicity of the finished product including inhalation, ingestion, skin, eye, sensitization, carcinogenic hazards. A toxic product is a finished product or material capable of causing bodily harm to an average individual by chemical action. The toxicity hazard should be under "normal use conditions."

6. Provide information on the proposed branding of the conveyor belt.

Conveyor belting accepted by MSHA as flame resistant (fire-resistant) shall be marked as follows: Metal stencils furnished by the manufacturer shall be used during the vulcanizing process to produce letters depressed into the conveyor belt with the words "Fire Resistant, USMSHA No. --

." This number will be assigned to the manufacturer after the sample has passed the tests. The letters and numbers shall be at least 1/2-inch high. The acceptance markings shall be placed approximately 1 inch from the edge of the carrying (top) cover of the conveyor belt and spaced at intervals not exceeding 30 feet for the entire length of the conveyor belt. The markings shall be so placed that they are alternately at opposite edges of the belt. Where cover thickness does not permit markings in accordance with the foregoing, other permanent markings may be accepted. (30 CFR 18.65(f)(1))

NOTE: After acceptance in granted, supply a prepaid conveyor belt sample with a 1-inch free border on all sides showing the complete brand.

7. Provide information on the quality assurance program.

Applications should provide the details with which the applicant intends to maintain compliance with criteria. Although the Approval and Certification Center does not approve quality control plans for conveyor belt actions, acceptance of a conveyor belt by MSHA obligates the manufacturer to maintain the quality of the product to insure the requirements are being met. MSHA does reserve the right to monitor inplant processes, review records, and interview employees with respect to the plan. Any changes affecting flammability or toxicity in the quality assurance program will require re-evaluation by MSHA. The quality assurance program shall include:

a. Procurement procedures for the components or ingredients of the product.

b. Manufacturing practices to maintain the formulation.

c. Procedures for recordkeeping, such as test results, etc.

d. Product sales literature

If option {c) is used for Formulation submittal, details of a flame test control program must be included as part of a quality assurance program.

If your quality assurance program was previously submitted to MSHA, please make reference as to when or in what previous action it wee submitted.

Conveyor Belt Product Description

Date_____ Telephone _____

Manufacturer_____

Address_____

Application Number_____

Check one: This is _____ a new application.

_____ a request for an extension (Include a photocopy of any prior acceptance letters from MSHA.)

Manufacturer's Product Trade Name and/or I.D. No. _____

_____

Covers: Compound Designation No._____

Minimum Thickness: Top Cover _____ Bottom Cover_____

Carcass: No. of Plies (Min. & Max.) _____

Skim Coat: Compound Designation No. _____

Thickness _____

Friction Compound Designation No. _____

Carcass Fabric:

Textile(s), Warp _____ Weft (fill)_____

Binder _____

Fabric Weight (oz./sq. yd. - Max.) _____

Fabric Treatment _____

Cable: Type of Metal

_____

Sizes Used

_____

Breaker (or Floated Ply): Top _____ Bottom _____

Textile(s), Warp _____ Weft (fill) _____

Fabric Weight (oz./sq. yd.)

_____

Fabric Treatment

_____

Specifications for Conveyor Belt Test Samples

The following are specifications for conveyor belt test samples to be included with applications for acceptance as MSHA fire-resistant.

A. Application for belts with only one carcass construction must be accompanied by precut samples in accordance with one of the following:

1. Submit four samples with the minimum gauge covers offered, 6"x l/2" by belt thickness, 2 parallel to the warp; 2 parallel to the weft (fill).

or

2. If the belt is constructed with optional breaker(s), submit four samples which include the breaker and the minimum thickness of covers offered.

MSHA Acceptance: The MSHA acceptance and identifying number will include the sample A.1. or A.2. plus all belts with the same carcass and compounds but with thicker covers.

B. Applications for belts with a line or "family" of related carcass constructions differing only by fabric weight and/or number of plies must be accompanied by eight precut samples, each made with the heaviest of the line of fabrics. (Be sure to identify all other fabrics to be included in the application in addition to those in the samples submitted.) If the belts are offered with a breaker, only samples with a breaker need be supplied. The samples should be as follows:

1. Four samples made with the least number of plies offered and with the minimum thickness of covers offered.

2. Four samples made with the greatest number of plies and the minimum thickness of covers offered.

MSHA Acceptance: The MSHA acceptance and identifying number will include all samples in B. plus all belts made with the same type of fabric and compounds but with heavier covers and with lighter weight fabric than the samples tested.

Lighter weights of the sample type of fabric can be added in the future under the same identifying number as follows:

I. By simply advising MSHA in writing of any lighter, thinner fabrics to be added and indicating the earlier

identification number. Include a copy of previous acceptance letters with the application for extension.

II. Heavier, thicker fabrics can be added, but eight precut test samples must be included as specified in B. along with the earlier identification number and acceptance letters.

III. Constructions with a greater or lesser number of plies can be added, but eight precut test samples with the minimum gage covers must be submitted and indicating the earlier identification number and acceptance letters.

C. All belt samples provided for testing must be at the minimum level of flame retardant ingredients (% of total wt.), as specified in the formulation information provided. In cases where a range of flame retardant ingredients are specified, a statement must be provided specifying that, "The samples provided for testing are at the minimum level of flame retardant ingredients."

EXAMPLE OF A TYPICAL APPLICATION

This application is being submitted in accordance with CER 30, Part 18.

1. Application Number: 790424

2. Product Description: Bitumen King Conveyor Belting, as described in the attached product description sheet 2

3. Ingredients: Method c. is used. Flame retardant ingredient quantities shown as minimum percent of total weight.

   Compound 98765:

   Styrene Butadiene rubber
   Zinc oxide
   Stearic acid
   SulPoblast accelerator
   Sulfur
   Petrowax - 6.0%
   Antimony oxide - 3.0%
   Furnace black
   Para-phenylene diamine antioxidant

   Compound 98764:

   Styrene Butadiene rubber
   Zinc oxide
   Stearic acid
   Sulfoblast accelerator
   Sulfur
   Petrowax - 6.0%
   Antimony oxide - 3.0%
   Furnace black
   Para-phenylene diamine antioxidant
   Phenolic resin

4. Flammability test data (optional):
   Flame - 7 sec. (avg.)
   Glow - 10 sec. (avg.)

5. Toxicity: This conveyor belting, as a composite product,

offers no toxicity potential under conditions of normal usage.

6. Branding: Conveyor belting, as described above, will be branded Bitumen King Conveyor, Fire Resistant, USMSHA No. 28- 99/x. The x will be a number to be assigned by MSHA following approval of the belting.

7. Quality Assurance Program: The Polymeric Rubber Company conveyor belt quality control manual was submitted to MSHA with Application No. 890302, dated March 2, 1989. This quality assurance program, still in effect, will be applied in the manufacture of Bitumen King conveyor belting.

NOTE: A proprietary statement as noted in Application Guidelines in Section 3 may be added to the application form.

Conveyor Belt Product Description

Date May 30. 1991 Telephone (801) 555-2222

Manufacturer Polymeric Rubber Co.

Address 345 Slope St., Odgen,. Utah 90753

Application Number 910530

Check one: This is __X__ a new application.

_____ a request for an extension. (Include a photocopy of any prior acceptance letters from MSHA.)

Manufacturer's Product Trade Name and/or I.D. No. Bitumen King 200. 300. 400. 500. 260. 390. 530. 650. 320. 480. 640. 800.

Covers: Compound Designation No. 98765

Minimum Thickness: Top Cover 1/32" Bottom Cover 1/32"

Carcass: No. of Plies (Min. & Max.) 2 through 5

Skim Coat: Compound Designation No. 98764

Thickness .030"

Friction Compound Designation No. None used.

Carcass Fabric:

Textile(s), Warp Polyester Weft (fill) Polyester

Binder None

Fabric Weight (oz./sq. yd. - Max.) 20 min., 30 max.

Fabric Treatment RFL

Cable: Type of Metal Not included.

Sizes Used ____B -_____

Breaker (or Floated Ply): Top x Optional) Bottom None

Textile(s), Warp Nylon Weft (fill) Nylon

Fabric Weight (oz./sq. yd.) 12

Fabric Treatment RFL

Criteria for Testing Conveyor Belts

1. Minimum and maximum number of plies.

2. Specify cover compound.
3. Minimum thickness of top and bottom covers (specify variations).
4. Maximum weight of ply material (specify variations in warp, weft or fill).
5. Specify carcass compound.
6. Specify skim coat.
7. Specify friction coat (test with friction coat if applicable).
8. Specify breaker (test with breaker).
9. Specify floated ply (test with floated ply).
10. Steel cable (specify cable diameters: test with minimum diameter).
11. Test the worst case composition of cover, carcass or skim and friction coat compounds. For test samples provided, specify the actual composition of flame retardant ingredients as a % of final weight.